

RENAL BIOPSIES IN CHILDREN: INDICATIONS AND RESULTS OF A MULTICENTRE STUDY. ABOUT 28 CASES

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Introduction

The renal biopsy (RB) is a significant advance in the management of kidney disease. It is used to characterise kidney disease, to guide treatment and to assess the short, medium and long-term renal prognosis. It requires a rigorous procedure in order to avoid sometimes fatal complications (3). Objective: to clarify the indications for renal biopsy and to describe the epidemiological and anatomopathological profile of nephropathies in children in order to improve their management.

Materials and methods

This was a retrospective and descriptive study of the needle kidney biopsy of children performed in the university hospitals of Abidjan and the West African sub-region over a study period of 7 years. Light microscopy on biopsies fixed with 10% formalin and immunofluorescence examination on frozen sections using monoclonal antibodies were performed.

Results

n= 28 cases of the renal biopsy (12.8%). The average age was 15.7+/-1.7 years (range: 11 - 18 years). The sex ratio was 1.54. Students represented 89.3% of the patients followed by those not attending school (7.1%). The mean proteinuria was 4.6+/-4 /24h (range: 0.45 to 21g/24h). The RB technique was exclusively transperietal. The sites of the RB were cortico-medullary (82.1%) and cortical (17.9%).

Table I: Distribution according to indications

Indication	Frequency	Percent
Nephrotic syndrome	25	75,7%
Kidney failure	4	12,2%
Rapidly progressive glomerulonephritis	2	9,1%
Nephritic syndrome	1	3%

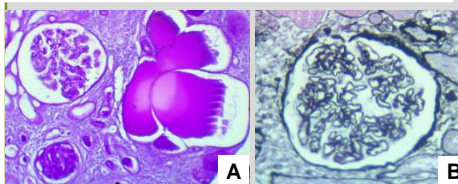


Figure 1: A-Alcian blue25 : FSGS lesion, tubes and cystic expansion within interstitial fibrosis. B- Jonesx40: igid glomerular capillaries lined with clubs and spicules;

Table II: Distribution based on the PBR study technique

Study technique	Frequency	Percent
Light microscopy	4	14,3%
Light microscopy + Immunofluorescence	24	85,7%

Table III: Distribution according to histological type indications

Histological type	Frequency	Percent
Idiopathic focal segmental glomerulosclerosis (FSGS)	11	39,3%
Extracapillary glomerulonephritis (ECG)	4	14,3%
Minimal glomerular lesion	3	10,7%
Post-infectious glomerulonephritis	3	10,7%
Extramembranous glomerulonephritis (GEM)	2	7,1%
Lupus glomerulonephritis	2	7,1%
Membranous-proliferative glomerulonephritis	1	3,6%
IgA-deposited glomerulonephritis	1	3,6%
Kidney amyloidosis	1	3,6%

Discussion

The age above 10 years is the preferred period for systemic diseases, especially in girls. In the literature, there is a male predominance. The aetiologies of glomerulopathies are very diverse and can be divided into primary or idiopathic causes and secondary causes. Secondary, to a range of pathologies such as infectious, immunological, systemic, neoplastic or hereditary. According to the literature and our study, FSH is the main cause of nephrotic syndrome in children.

Conclusion

The needle kidney biopsy is an essential diagnostic tool in the management of renal diseases in children. The most common types are idiopathic segmental and focal hyalinosis and extracapillary glomerulonephritis.

References

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